

LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES



**OFFICE OF FISHERIES
INLAND FISHERIES DIVISION**

PART VI -B

WATERBODY MANAGEMENT PLAN SERIES

CHATHAM LAKE

**WATERBODY EVALUATION &
RECOMMENDATIONS**

CHRONOLOGY

DOCUMENT SCHEDULED TO BE UPDATED ANNUALLY

JANUARY 2009 – Prepared by
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WATERBODY EVALUATION

STRATEGY STATEMENT

Recreational

With less than 260 households, Chatham could scarcely be considered an urban setting. However, Chatham Lake fits well in the LDWF strategy to provide an urban opportunity to harvest fish. The goal of urban fisheries management is to provide increased recreational man-hours through quality fishing opportunities to local anglers.

Commercial

The physical characteristics of Chatham Lake do not support the large rough fish species that normally comprise a commercial fishery; therefore, a commercial fishery strategy is not used.

Species of Special Concern

No threatened or endangered fish species are found in this waterbody.

EXISTING HARVEST REGULATIONS

Recreational

Statewide regulations for all fish species

Black Bass (*Largemouth, spotted*): 10 daily per person of any size

Buffalo Fish or their hybrids: 16 inch min. total length limit, 25 per day under 16"

Freshwater Drum (*Gaspergou*): 12 inch min. total length limit, 25 per day under 12"

Bowfin (*Choupique, Grinnel*): 16 inch min. total length limit

Channel Catfish: 11 inch min. total length limit

Blue Catfish: 12 inch min. total length limit

Flathead Catfish: 14 inch min. total length limit

Crappie: 50 daily

Commercial

Statewide regulations on all species

Blue Catfish (*Ictalurus furcatus*): 12 inches minimum total length.

Buffalo (*Ictiobus spp.*): 16 inches minimum total length.

Channel Catfish (*Ictalurus punctatus*): 11 inches minimum total length.

Flathead Catfish (*Pylodictis olivaris*): 14 inches minimum total length.

Freshwater Drum (*Aplodinotus grunniens*): 12 inches minimum total length.

Bowfin (*Amia calva*): 22 inches minimum total length.

Fishing Gear

Gill Net: minimum mesh of not less than three inches square or six inches stretched after treating with tar or copper. No gill net in use shall exceed 1,200 feet in length.

Hoop Net: mesh of not less than one inch square or two inches stretched.

Seine: minimum mesh of not less than two inches square or four inches stretched.

Slat Trap: any device, used solely for the capture of catfish, which is cylindrical, rectangular or square in cross section configuration, constructed of slats forming the length of the trap, with at least one pair of slats spaced at least one inch apart from each other on at least three sides of the trap and which is no more than six feet in length, two feet in diameter or width and which has one or more cone shaped throats, flues or entrances.

Trammel Net: minimum mesh of not less than three inches square or six inches stretched.

Trotline: hooks must be a minimum of 24 inches apart.

Wire Net: mesh size must not be less than one square inch or two inches stretched.

Parish Regulations

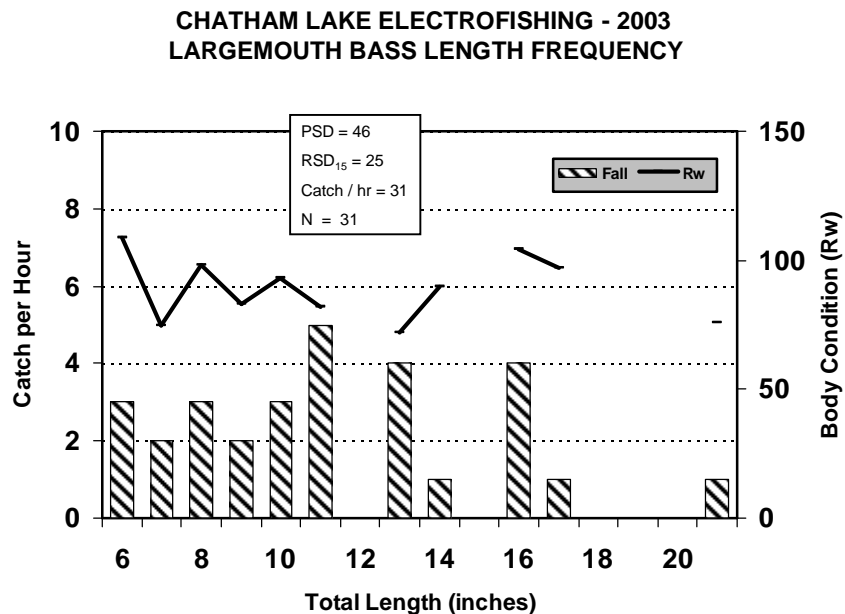
No commercial fishing May 15 – Sept. 14.

Gillnets: 3 inch min. square during pool stage, 4 inch min. during drawdowns.

SPECIES EVALUATION

Recreational

Chatham Lake has been the subject of minimal sampling due to its small size and close proximity to waters with higher public utilization. Electrofishing was conducted in 2003 to collect data regarding largemouth bass. Largemouth bass are targeted as a species indicative of the overall fish population due to their high position in the food chain. Of various sampling gears used to collect fish population data, electrofishing is the best indicator of largemouth bass abundance and size distribution. Results from the 2003 sample are in the chart below:



Largemouth bass abundance and size structure as indicated in the 2003 electrofishing sample was unremarkable. Body condition of the bass was normal.

During the Chatham Lake drawdown of 2007, all fish were removed from the remaining waters of the lake basin. Scheduled sampling is designed to provide information related to the development of the new Chatham Lake fishery.

Fish species observed after the Chatham Lake rotenone kill are worth noting. Spotted gar were found to be the most common predatory fish, not largemouth bass. Also of note is that some gar survived the initial rotenone application and two follow-up applications. Netting was required to remove the rotenone resistant gar.

Commercial

Large rough fish species that normally comprise a commercial fishery are not found in this water body.

HABITAT EVALUATION

Aquatic Vegetation

At pool stage, approximately 50% of Chatham Lake is less than 4 foot deep. Overabundant aquatic vegetation is typical in the shallow water. Water primrose and alligator weed compose a significant obstacle to angler access throughout the warm weather growing season. Coverage of submerged aquatic plant species is generally sparse. Submerged vegetation seldom extends to waters deeper than 3 feet. Common species include slender naiad (*Najas minor*) and coontail (*Ceratophyllum demersum*). In August, 2004, common salvinia (*Salvinia minima*) was observed in Chatham Lake. Coverage of the exotic species was estimated at approximately 10 acres. Herbicide applications and cold weather reduced salvinia to an undetectable level in the winter of 2004.

Substrate

The substrate of Chatham Lake is composed of sandy loam. Organic content is generally high in the upper end of the lake due to long term overabundant aquatic vegetation. Suitable fish spawning substrate is available along the shoreline of the deeper end of the lake.

Artificial Structure

No artificial habitat has been placed in Chatham Lake to date.

CONDITION IMBALANCE / PROBLEM

Impounded in 1952, Chatham Lake is an old lake as compared to other lakes in the surrounding area. The excellent fishing of past decades had long since deteriorated due to an unbalanced fish population that included undesirable fish species. The water control structure was inoperable and water level manipulation was not possible.

CORRECTIVE ACTION NEEDED

Repairs to or replacement of the Chatham Lake water control structure was first priority. To facilitate work to the control structure, a plan that included dewatering of the lake to the greatest extent possible was agreed upon by JPWD, LDWF and DOTD. With the lake down to its lowest level, less effort and expense was required for repairs to the

control structure. The reduced water volume made removal of the existing fish population a viable option. Construction to expand the existing boat ramp was also made possible with the low water level.

RECOMMENDATIONS

1. Develop balanced fish population that includes species that can be accessed by non-boaters (i.e. channel catfish, sunfish species).
2. Schedule fall drawdowns of 3-5 feet below pool stage to allow shallow spawning areas to become more firm. Dewatering should not exceed 6 inches per day. Drawdowns should begin soon after Labor Day and extend till mid January.
3. Remove yo-yos, trotlines, gill nets, trammel nets, hoop nets, and fish traps to allow for more equitable allocation of fisheries resources.
4. Encourage construction of fishing piers, artificial reefs, spawning beds, and shoreline trails to increase shoreline angler success.